



## SEQUENCE LISTING

<110> BEELEY, NIGEL R.A.  
PRICKETT, KATHRYN S.  
BEAUMONT, KEVIN

<120> NOVEL MIXED AMYLIN ACTIVITY COMPOUNDS

<130> 18528-038

<140> 09/622,104  
<141> 2001-07-17

<150> PCT/US99/02603  
<151> 1999-02-05

<150> 60/074,746  
<151> 1998-02-13

<160> 32

<170> PatentIn Ver. 3.3

<210> 1  
<211> 29  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide construct

<220>  
<223> C-term amidated

<400> 1  
Leu Ser Thr Cys Val Leu Gly Arg Leu Ser Gln Glu Leu His Arg Leu  
1 5 10 15  
Gln Thr Tyr Pro Arg Thr Asn Thr Gly Ser Asn Thr Tyr  
20 25

<210> 2  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide construct

<220>  
<221> MOD\_RES  
<222> (1)  
<223> 4-methylpentanoyl-Ser

<220>  
 <221> MOD\_RES  
 <222> (6)  
 <223> Aib

<220>  
 <221> MOD\_RES  
 <222> (7)  
 <223> Lys(for)

<220>  
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 <223> Aib

<220>  
 <221> MOD\_RES  
 <222> (14)  
 <223> Lys(for)

<220>  
 <223> C-term amidated

<400> 2  
 Ser Thr Ala Val Leu Xaa Lys Leu Ser Gln Glu Leu Xaa Lys Leu Gln  
 1 5 10 15

Thr Tyr Pro Arg Thr Asn Thr Gly Ser Gly Thr Pro  
 20 25

<210> 3  
 <211> 29  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 peptide construct

<220>  
 <221> MOD\_RES  
 <222> (1)  
 <223> Ac-Leu

<220>  
 <223> C-term amidated

<400> 3  
 Leu Ser Thr Ser Val Leu Gly Arg Leu Ser Gln Glu Leu His Arg Leu  
 1 5 10 15

Gln Thr Tyr Pro Arg Thr Asn Thr Gly Ser Asn Thr Tyr  
 20 25

<210> 4  
 <211> 29  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 peptide construct

<220>  
 <223> C-term amidated

<400> 4  
 Leu Ser Thr Ala Val Leu Gly Arg Leu Ser Gln Glu Leu His Arg Leu  
           1                          5                          10                          15  
 Gln Thr Tyr Pro Arg Thr Asn Thr Gly Ser Asn Thr Tyr  
                           20                          25

<210> 5  
 <211> 29  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 peptide construct

<220>  
 <223> C-term amidated

<400> 5  
 Leu Ser Thr Ser Val Leu Gly Arg Leu Ser Gln Glu Leu His Arg Leu  
           1                          5                          10                          15  
 Gln Thr Tyr Pro Arg Thr Asn Thr Gly Ser Asn Thr Tyr  
                           20                          25

<210> 6  
 <211> 29  
 <212> PRT  
 <213> Artificial Sequence

<220>  
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 peptide construct

<220>  
 <221> MOD\_RES  
 <222> (1)  
 <223> Ac-Leu

<220>  
 <223> C-term amidated

<400> 6

Leu Ser Thr Ala Val Leu Gly Arg Leu Ser Gln Glu Leu His Arg Leu  
1 5 10 15

Gln Thr Tyr Pro Arg Thr Asn Thr Gly Ser Asn Thr Tyr  
20 25

<210> 7

<211> 29

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
peptide construct

<220>

<221> MOD\_RES

<222> (1)

<223> Ac-Leu

<220>

<223> C-term amidated

<400> 7

Leu Ser Thr Cys Val Leu Gly Arg Leu Ser Gln Glu Leu His Arg Leu  
1 5 10 15

Gln Thr Tyr Pro Arg Thr Asn Thr Gly Ser Asn Thr Tyr  
20 25

<210> 8

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
peptide construct

<220>

<221> MOD\_RES

<222> (3)

<223> Aib

<220>

<221> MOD\_RES

<222> (4)

<223> Lys(for)

<220>

<221> MOD\_RES

<222> (10)

<223> Aib

<220>  
 <221> MOD\_RES  
 <222> (11)  
 <223> Lys(for)

<220>  
 <223> C-term amidated

<400> 8  
 Val Leu Xaa Lys Leu Ser Gln Glu Leu Xaa Lys Leu Gln Thr Tyr Pro  
   1                  5                  10                  15

Arg Thr Asn Thr Gly Ser Asn Thr Tyr  
                   20                  25

<210> 9  
 <211> 25  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
           peptide construct

<220>  
 <221> MOD\_RES  
 <222> (1)  
 <223> Ac-Val

<220>  
 <221> MOD\_RES  
 <222> (3)  
 <223> Aib

<220>  
 <221> MOD\_RES  
 <222> (4)  
 <223> Lys(for)

<220>  
 <221> MOD\_RES  
 <222> (10)  
 <223> Aib

<220>  
 <221> MOD\_RES  
 <222> (11)  
 <223> Lys(for)

<220>  
 <223> C-term amidated

<400> 9  
 Val Leu Xaa Lys Leu Ser Gln Glu Leu Xaa Lys Leu Gln Thr Tyr Pro  
   1                  5                  10                  15

Arg Thr Asn Thr Gly Ser Asn Thr Tyr  
                   20                  25

<210> 10  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
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           peptide construct

<220>  
 <221> MOD\_RES  
 <222> (1)  
 <223> 4-methylpentanoyl-Ser

<220>  
 <221> MOD\_RES  
 <222> (6)  
 <223> Aib

<220>  
 <221> MOD\_RES  
 <222> (7)  
 <223> Lys(for)

<220>  
 <221> MOD\_RES  
 <222> (13)  
 <223> Aib

<220>  
 <221> MOD\_RES  
 <222> (14)  
 <223> Lys(for)

<220>  
 <223> C-term amidated

<400> 10  
 Ser Thr Ala Val Leu Xaa Lys Leu Ser Gln Glu Leu Xaa Lys Leu Gln  
   1                  5                  10                  15

Thr Tyr Pro Arg Thr Asn Thr Gly Ser Asn Thr Tyr  
                   20                  25

<210> 11  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
           peptide construct

<220>  
 <221> MOD\_RES  
 <222> (1)  
 <223> 4-methylpentanoyl-Ser

<220>  
 <221> MOD\_RES  
 <222> (6)  
 <223> Aib

<220>  
 <221> MOD\_RES  
 <222> (7)  
 <223> Lys(for)

<220>  
 <221> MOD\_RES  
 <222> (13)  
 <223> Aib

<220>  
 <221> MOD\_RES  
 <222> (14)  
 <223> Lys(for)

<220>  
 <223> C-term amidated

<400> 11  
 Ser Thr Cys Val Leu Xaa Lys Leu Ser Gln Glu Leu Xaa Lys Leu Gln  
           1                  5                  10                  15

Thr Tyr Pro Arg Thr Asn Thr Gly Ser Asn Thr Tyr  
                   20                  25

<210> 12  
 <211> 25  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
           peptide construct

<220>  
 <221> MOD\_RES  
 <222> (3)  
 <223> Aib

<220>  
 <221> MOD\_RES  
 <222> (4)  
 <223> Lys(for)

<220>  
 <221> MOD\_RES  
 <222> (10)  
 <223> Aib

<220>  
 <221> MOD\_RES  
 <222> (11)  
 <223> Lys(for)

<220>  
 <223> C-term amidated

<400> 12  
 Ala Thr Xaa Lys Leu Ala Asn Glu Leu Xaa Lys Leu Gln Thr Tyr Pro  
           1                  5                  10                  15

Arg Thr Asn Thr Gly Ser Asn Thr Tyr  
                   20                  25

<210> 13  
 <211> 25  
 <212> PRT  
 <213> Artificial Sequence

<220>  
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           peptide construct

<220>  
 <221> MOD\_RES  
 <222> (1)  
 <223> Ac-Ala

<220>  
 <221> MOD\_RES  
 <222> (3)  
 <223> Aib

<220>  
 <221> MOD\_RES  
 <222> (4)  
 <223> Lys(for)

<220>  
 <221> MOD\_RES  
 <222> (10)  
 <223> Aib

<220>  
 <221> MOD\_RES  
 <222> (11)  
 <223> Lys(for)

<220>  
 <223> C-term amidated



&lt;400&gt; 13

Ala Thr Xaa Lys Leu Ala Asn Glu Leu Xaa Lys Leu Gln Thr Tyr Pro  
 1 5 10 15

Arg Thr Asn Thr Gly Ser Asn Thr Tyr  
 20 25

&lt;210&gt; 14

&lt;211&gt; 29

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide construct

&lt;220&gt;

&lt;223&gt; C-term amidated

&lt;400&gt; 14

Leu Ser Thr Cys Val Leu Gly Lys Leu Ser Gln Glu Leu His Lys Leu  
 1 5 10 15

Gln Thr Tyr Pro Arg Thr Asn Thr Gly Ser Gly Thr Pro  
 20 25

&lt;210&gt; 15

&lt;211&gt; 25

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide construct

&lt;220&gt;

&lt;223&gt; C-term amidated

&lt;400&gt; 15

Val Leu Gly Lys Leu Ser Gln Glu Leu His Lys Leu Gln Thr Tyr Pro  
 1 5 10 15

Arg Thr Asn Thr Gly Ser Gly Thr Pro  
 20 25

&lt;210&gt; 16

&lt;211&gt; 25

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide construct

&lt;220&gt;

&lt;223&gt; C-term amidated

&lt;400&gt; 16

Val	Leu	Gly	Lys	Leu	Ser	Gln	Glu	Leu	His	Lys	Leu	Gln	Thr	Tyr	Pro
1				5				10						15	

Arg	Thr	Asn	Thr	Gly	Ser	Asn	Thr	Tyr
			20				25	

&lt;210&gt; 17

&lt;211&gt; 25

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide construct

&lt;220&gt;

&lt;221&gt; MOD\_RES

&lt;222&gt; (1)

&lt;223&gt; AcHN-Val

&lt;220&gt;

&lt;223&gt; C-term amidated

&lt;400&gt; 17

Val	Leu	Gly	Lys	Leu	Ser	Gln	Glu	Leu	His	Lys	Leu	Gln	Thr	Tyr	Pro
1				5				10						15	

Arg	Thr	Asn	Thr	Gly	Ser	Asn	Thr	Tyr
			20				25	

&lt;210&gt; 18

&lt;211&gt; 29

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Synthetic peptide construct

&lt;220&gt;

&lt;221&gt; MOD\_RES

&lt;222&gt; (1)

&lt;223&gt; Ac-Leu

&lt;220&gt;

&lt;223&gt; C-term amidated

&lt;400&gt; 18

Leu	Ser	Thr	Ala	Val	Leu	Gly	Lys	Leu	Ser	Gln	Glu	Leu	His	Lys	Leu
1				5				10						15	

Gln Thr Tyr Pro Arg Thr Asn Thr Gly Ser Gly Thr Pro  
20 25

```
<210> 19
<211> 29
<212> PRT
<213> Artificial Sequence
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<220>  
<223> Description of Artificial Sequence: Synthetic peptide construct

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<220>  
<221> MOD_RES  
<222> (1)  
<223> Ac-Leu
```

```
<220>  
<221> MOD_RES  
<222> (14)  
<223> Aib
```

<220>  
<223> C-term amidated

<400> 19  
Leu Ser Thr Ala Val Leu Gly Lys Leu Ser Gln Glu Leu Xaa Lys Leu  
1 5 10 15

Gln Thr Tyr Pro Arg Thr Asn Thr Gly Ser Gly Thr Pro  
20 25

```
<210> 20
<211> 28
<212> PRT
<213> Artificial Sequence
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<220>
<223> Description of Artificial Sequence: Synthetic
      peptide construct
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<220>  
<221> MOD_RES  
<222> (1)  
<223> Isocaproyl-Ser
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<220>  
<223> C-term amidated

<400> 20  
Ser Thr Ala Val Leu Gly Lys Leu Ser Gln Glu Leu His Lys Leu Gln  
1 5 10 15

Thr Tyr Pro Arg Thr Asn Thr Gly Ser Gly Thr Pro  
20 25

<210> 21  
 <211> 29  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 peptide construct

<220>  
 <221> MOD\_RES  
 <222> (1)  
 <223> H-Leu

<220>  
 <223> C-term amidated

<400> 21  
 Leu Ser Thr Ala Val Leu Gly Lys Leu Ser Gln Glu Leu His Lys Leu  
           1                  5                  10                  15

Gln Thr Tyr Pro Arg Thr Asn Thr Gly Ser Gly Thr Pro  
                   20                  25

<210> 22  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 peptide construct

<220>  
 <221> MOD\_RES  
 <222> (1)  
 <223> Adamantacetyl-Ser

<220>  
 <223> C-term amidated

<400> 22  
 Ser Thr Ala Val Leu Gly Lys Leu Ser Gln Glu Leu His Lys Leu Gln  
           1                  5                  10                  15

Thr Tyr Pro Arg Thr Asn Thr Gly Ser Gly Thr Pro  
                   20                  25

<210> 23  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 peptide construct

<220>  
 <221> MOD\_RES  
 <222> (1)  
 <223> CH<sub>3</sub>CO-Ser

<220>  
 <223> C-term amidated

<400> 23  
 Ser Thr Ala Val Leu Gly Lys Leu Ser Gln Glu Leu His Lys Leu Gln  
           1                  5                  10                  15

Thr Tyr Pro Arg Thr Asn Thr Gly Ser Gly Thr Pro  
                   20                  25

<210> 24  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 peptide construct

<220>  
 <221> MOD\_RES  
 <222> (1)  
 <223> Cyclohexylpropionyl-Ser

<220>  
 <223> C-term amidated

<400> 24  
 Ser Thr Ala Val Leu Gly Lys Leu Ser Gln Glu Leu His Lys Leu Gln  
           1                  5                  10                  15

Thr Tyr Pro Arg Thr Asn Thr Gly Ser Gly Thr Pro  
                   20                  25

<210> 25  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 peptide construct

<220>  
 <221> MOD\_RES  
 <222> (1)  
 <223> Cyclopentyl C(O)-Ser

<220>

<223> C-term amidated

<400> 25

Ser Thr Ala Val Leu Gly Lys Leu Ser Gln Glu Leu His Lys Leu Gln  
1 5 10 15

Thr Tyr Pro Arg Thr Asn Thr Gly Ser Gly Thr Pro  
20 25

<210> 26

<211> 28

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
peptide construct

<220>

<221> MOD\_RES

<222> (1)

<223> Decanoyl-Ser

<220>

<223> C-term amidated

<400> 26

Ser Thr Ala Val Leu Gly Lys Leu Ser Gln Glu Leu His Lys Leu Gln  
1 5 10 15

Thr Tyr Pro Arg Thr Asn Thr Gly Ser Gly Thr Pro  
20 25

<210> 27

<211> 29

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
peptide construct

<220>

<221> MOD\_RES

<222> (1)..(6)

<223> May be (i) Leu-Leu, Val-Leu, Ile-Leu, tert-Leu-Leu, Nle-Leu, Ala-Thr, and N-acylated derivatives thereof;  
or (ii) SEQ ID NO: 28; region may be 2 or 6 residues

<220>

<221> MOD\_RES

<222> (7)

<223> Gly, Glu, Asn or Aib

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<220>  
<221> MOD_RES  
<222> (8)  
<223> Arg, Orn, Lys or epsilon-amidated derivatives thereof
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<220>
<221> MOD_RES
<222> (10)..(11)
<223> May be Ser-Gln, Thr-Gln, Ala-Asn or Thr-Asn
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```
<220>
<221> MOD_RES
<222> (14)
<223> His, Aib, Ile, Leu or Val
```

```
<220>
<221> MOD_RES
<222> (15)
<223> Arq, Orn, Lys or epsilon-amidated derivatives thereof
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<220>
<221> MOD_RES
<222> (24)..(29)
<223> May be SEQ ID NOS: 29-32
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<220>  
<223> C-term amidated or hydroxylated

<400> 27  
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Leu Xaa Xaa Glu Leu Xaa Xaa Leu  
1 5 10 15

Gln Thr Tyr Pro Arg Thr Asn Xaa Xaa Xaa Xaa Xaa Xaa  
20 25

```
<210> 28
<211> 6
<212> PRT
<213> Artificial Sequence
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<220>  
<223> Description of Artificial Sequence: Synthetic peptide construct

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<220>  
<221> MOD_RES  
<222> (1)  
<223> Leu, Val, Ile, tert-Leu, Nva, Abu, Nle or  
N-acylated derivatives thereof
```

```
<220>
<221> MOD_RES
<222> (4)
<223> Ala, Ser, Cys or Thr
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<400> 28  
Xaa Ser Thr Xaa Val Leu  
1 5

<210> 29  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide construct

<220>  
<223> C-term amidated

<400> 29  
Thr Gly Ser Asn Thr Tyr  
1 5

<210> 30  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide construct

<220>  
<223> C-term amidated

<400> 30  
Thr Gly Ser Gly Thr Pro  
1 5

<210> 31  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide construct

<220>  
<223> C-term amidated

<400> 31  
Val Gly Ser Asn Thr Tyr  
1 5



<210> 32  
<211> 6  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide construct

<220>  
<223> C-term amidated

<400> 32  
Val Gly Ser Gly Thr Pro  
1 5